

Regulatory WLAN Antenna Information

(English Language Required for Intel Regulatory Review / Approval)

(OEM/ODM or antenna vendor is required to complete this document with platform antenna information. Remove Intel references and make this your own document)

Platform	
Platform Owner	Samsung
Brand Name	Samsung
Model Name	Pebble
ODM	
Target Launch Date	(YYYY/ MM/ DD)
Antenna	
Brand Name	FOXCONN
Part Number	<input type="checkbox"/> Tx1 Antenna:WDAN-M1PB1001-DF
	<input type="checkbox"/> Tx2 (or Rx2) Antenna:WDAN-M1PB1002-DF
	<input type="checkbox"/> Tx3 (or Rx3) Antenna
Module	
With WLAN Module	<input type="checkbox"/> WM3B2200BG
(Check Box)	<input type="checkbox"/> WM3B2915ABG
	<input type="checkbox"/> WM3945ABG
	<input type="checkbox"/> 4965AGN
	<input type="checkbox"/> 4965AG_
	<input type="checkbox"/> 533ANX Family
	<input type="checkbox"/> 512ANX Family
	<input type="checkbox"/> 533AN Family
	<input type="checkbox"/> 512AN Family

Antenna Sample / Antenna Data Requirements for worldwide regulatory approval

Section	Description of Required OEM / ODM Antenna Information	US / IC	EU	Japan	Taiwan	S.Korea
1A	Part Number for Antenna only	Required	Required	Required	Required	Required
1B	Antenna Manufacturer Name	Required	Required	Required	Required	Required
1C	Description of Antenna Type	Required	N/A	N/A	N/A	N/A
1D	Part number of Antenna Assembly / cable impedance, length & diameter.	Required	Desired	Desired	Desired	Desired
1E	Tx1, Tx2 & Tx3 antenna (Peak Gain W/ cable loss) *	Required	Required	Required	Required	Required
	1E OR 1F, 1G, 1H					
1F	Tx1, Tx2 & Tx3 antenna (Peak Gain only) *	Required	Required	Required	Required	Required
1G	VSWR of cable including connector	Required	Required	Required	Required	Required
1H	Tx1, Tx2 & Tx3 antenna (Cable loss W/ connector) *	Required	Required	Required	Required	Required
2	Dimensioned Photographs <u>and</u> Drawings of Tx1, Tx2, and Tx3 (or Rx3) antennas	Required	Required	Required	Required	Required
3	Radiation patterns of antennas loaded in the host platform.	Required	Desired	Required	N/A	Required
4	Platform model name / number - correlated to antenna manufacturer and antenna part number	Required	Required	Desired	Required	Desired
5	Photograph(s) or Drawings showing location of antennas in platform. <u>(S. Korea requires photographs of antennas for approval submission). Taiwan requires pictures of each antenna type shown in the system.</u>	Required	Required	Desired	<u>Required (Photos)</u>	<u>Required (Photos)</u>
6	Mech. drawings / photos with dimensions of antenna locations and distance from end-user (For evaluation of SAR testing requirement).	Required	N/A	N/A	N/A	N/A
7	Photograph(s) or Drawings showing the location of all antennas (WLAN, other) and distance between those transmitting antennas. Information will be used to evaluate whether co-location testing is required.	Required	N/A	N/A	N/A	N/A
8	Local representative contact information for LMA/ PARS process.	Required	N/A	N/A	N/A	N/A

NOTE:

(*) if 3rd antenna is Rx only (e.g. receive only for 4965AGN) then peak gain and cable loss not required

Antenna Information

Section 1. Antenna Assembly Specifications

Antenna Assembly Summary:

1A Antenna Part Number	1B Manufacture	1C Antenna Type	1D Cable Assembly Part Number and Information	1E *Peak Gain W/ Cable loss (dBi)	1F Peak Gain w/o Cable Loss (dBi)	1G VSWR	1H Cable Loss (dBi)
(P/N: WDAN-M1PB1 001-DF) Tx1 antenna	HON HAI PRECISION IND. CO.,LTD.	FIPA	1. Cable P/N: FOXCONN:703-3009-513 2. Cable type: 30 AWG O.D. 1.37 mm 50 ohm coaxial cable 3. Cable length: 400 mm 4. Connector P/N: SGX0003-02	2400-2500MHz 0.54 dBi (peak)	2400-2500MHz 1.53 dBi (peak)	2400-2500MHz 2.00 max	2400-2500MHz 0.99 dBi (peak)
				5150-5350MHz 0.74 dBi (peak)	5150-5350MHz 2.29 dBi (peak)	5150-5350MHz 2.00 max	5150-5350MHz 1.55 dBi (peak)
				5470-5725MHz -0.74 dBi (peak)	5470-5725MHz 0.85 dBi (peak)	5470-5725MHz 2.00 max	5470-5725MHz 1.59 dBi (peak)
				5725-5850MHz -0.74 dBi (peak)	5725-5850MHz 0.89 dBi (peak)	5725-5850MHz 2.00 max	5725-5850MHz 1.63 dBi (peak)
(P/N: WDAN-M1PB1 002-DF) Tx2(or Rx2) antenna	HON HAI PRECISION IND. CO.,LTD.	FIPA	1. Cable P/N: FOXCONN:703-3009-513 2. Cable type: 30 AWG O.D. 1.37 mm 50 ohm coaxial cable 3. Cable length:550 mm 4. Connector P/N: SGX0003-02	2400-2500MHz -1.40 dBi (peak) *	2400-2500MHz -0.04 dBi (peak) *	2400-2500MHz 2.00 max *	2400-2500MHz 1.36 dBi (peak) *
				5150-5350MHz -0.02 dBi (peak) *	5150-5350MHz 2.12 dBi (peak) *	5150-5350MHz 2.00 max *	5150-5350MHz 2.14 dBi (peak) *
				5470-5725MHz -0.15 dBi (peak) *	5470-5725MHz 2.03 dBi (peak) *	5470-5725MHz 2.00 max *	5470-5725MHz 2.18 dBi (peak) *
				5725-5850MHz -0.09 dBi (peak) *	5725-5850MHz 2.15 dBi (peak) *	5725-5850MHz 2.00 max *	5725-5850MHz 2.24 dBi (peak) *

NOTE:

(*) If Rx2/Rx3 only (2nd or 3rd antenna receives only, e.g. for 512 family & 4965AGN) then the information marked with * is not required

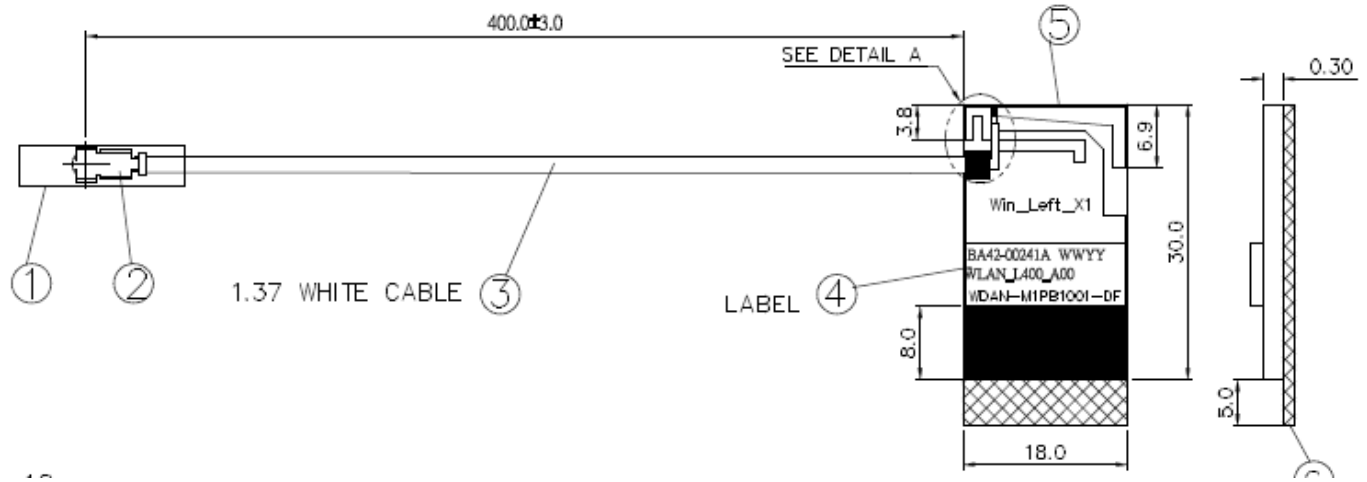
Antenna Peak Gain Table:

Frequency (MHz)	Tx1 antenna		Tx2(or Rx2). Antenna	
	Horizontal (dBi)	Vertical (dBi)	Horizontal (dBi)	Vertical (dBi)
2400	-1.32	-3.17	-2.13	-2.63
2450	-0.60	-2.49	-1.83	-1.40
2500	0.54	-2.87	-2.22	-2.30
5150	-0.37	-2.23	-1.06	-2.62
5250	0.73	-3.27	-0.69	-3.74
5350	0.74	-1.83	-0.02	-1.77
5470	-0.89	-3.65	-0.23	-1.97
5600	-0.84	-3.65	-0.15	-2.59
5725	-0.74	-2.80	-0.23	-2.33
5785	-1.05	-2.40	-0.19	-2.35
5850	-0.28	-1.76	-0.09	-2.02

- Antenna Peak Gain required being test in system basis.
- 1E frame contend absolutely peak antenna gain include H/V
- If Rx2 only (2nd antenna receives only, e.g. for 512 family) then the information is not required for Rx2.
- If Rx3 only (3rd antenna receives only, e.g. for 4965AGN) then the information is not required for Rx3.

Section 2. Dimensioned Photos or Drawings of Antennas

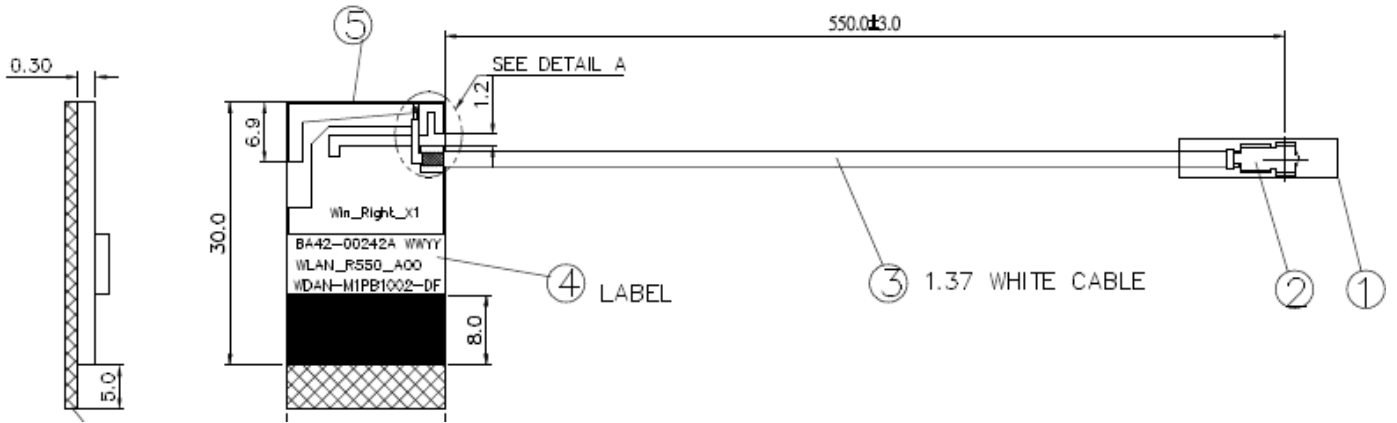
Include a dimensioned photo or dimensioned drawing of Tx1 antenna here.



Antenna photo :



Include a dimensioned photo or dimensioned drawing of Tx2(or Rx2) antenna here.

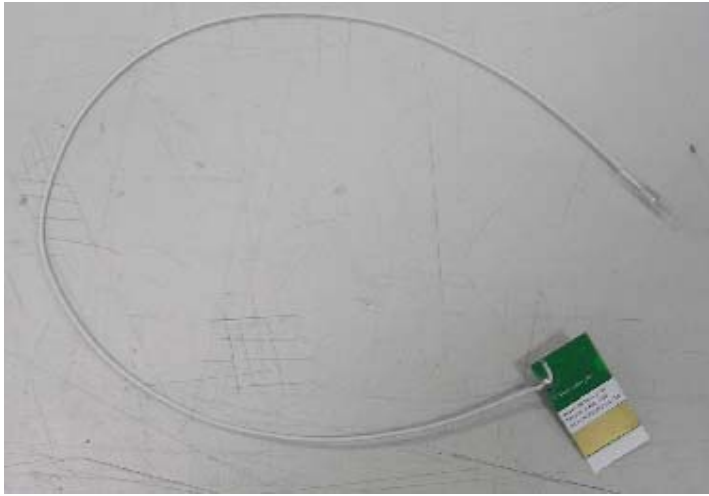


Antenna photo :

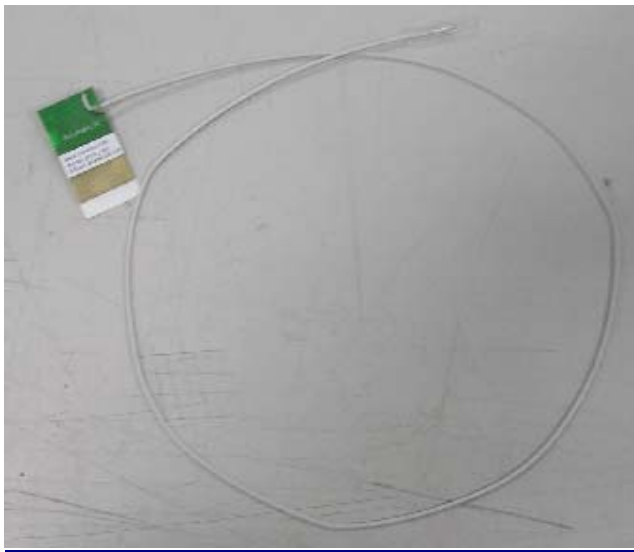


Include front view photo of all 2 antennas here.

Antenna Manufacturer: FOXCONN
Antenna Part Number: WDAN-M1PB1001-DF (Tx1)



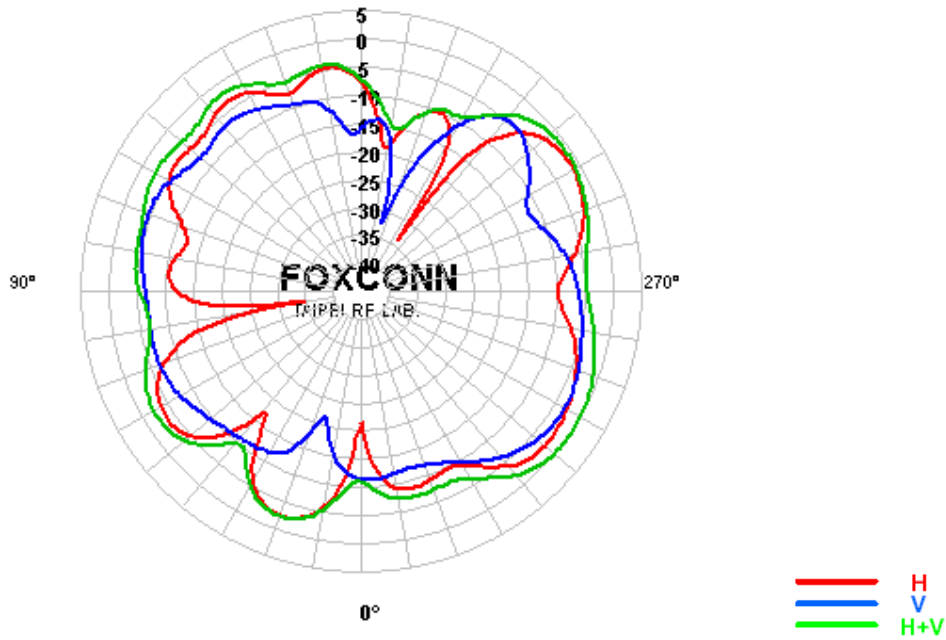
Antenna Manufacturer: FOXCONN
Antenna Part Number: WDAN-M1PB1002-DF (Tx2 or Rx2)



Section 3. Radiation characteristics of antennae Loaded in Host Platform

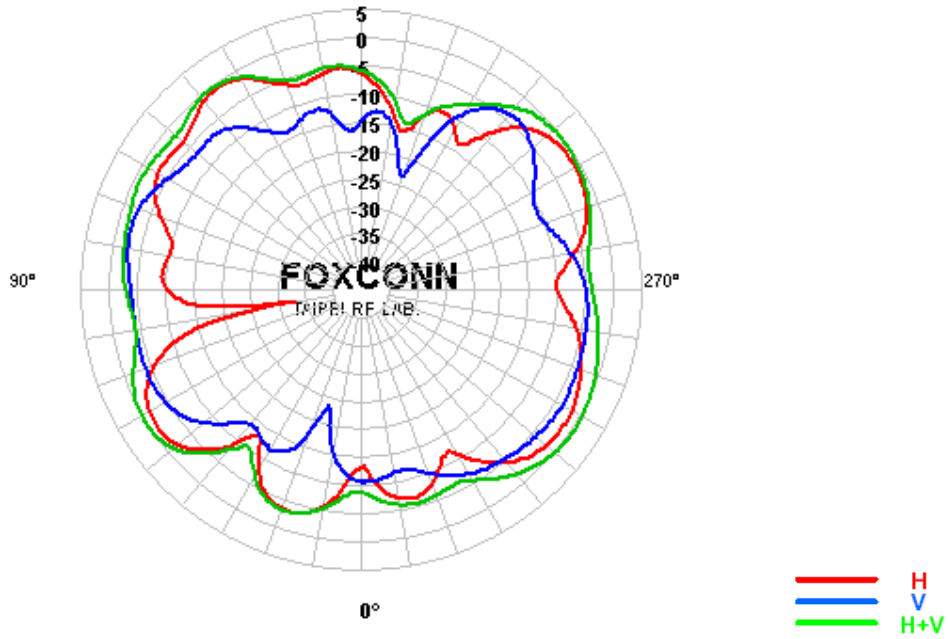
2400-2500MHz radiation characteristic

Tx1 antenna: 2400 MHz



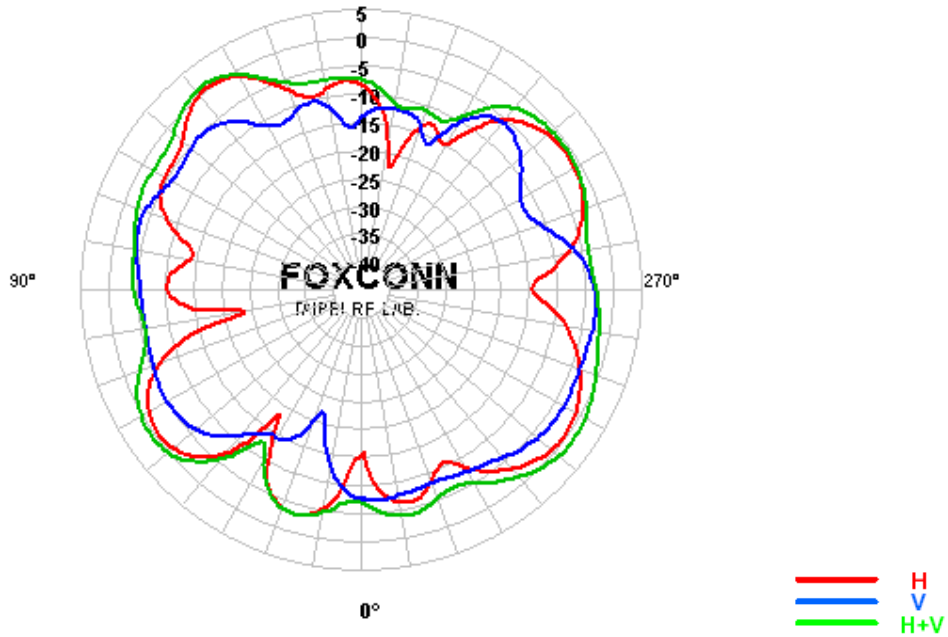
Center Frequency	2400 MHz
Horizontal (dBi) peak	-1.32
Vertical (dBi) peak	-3.17

Tx1 antenna: 2450 MHz



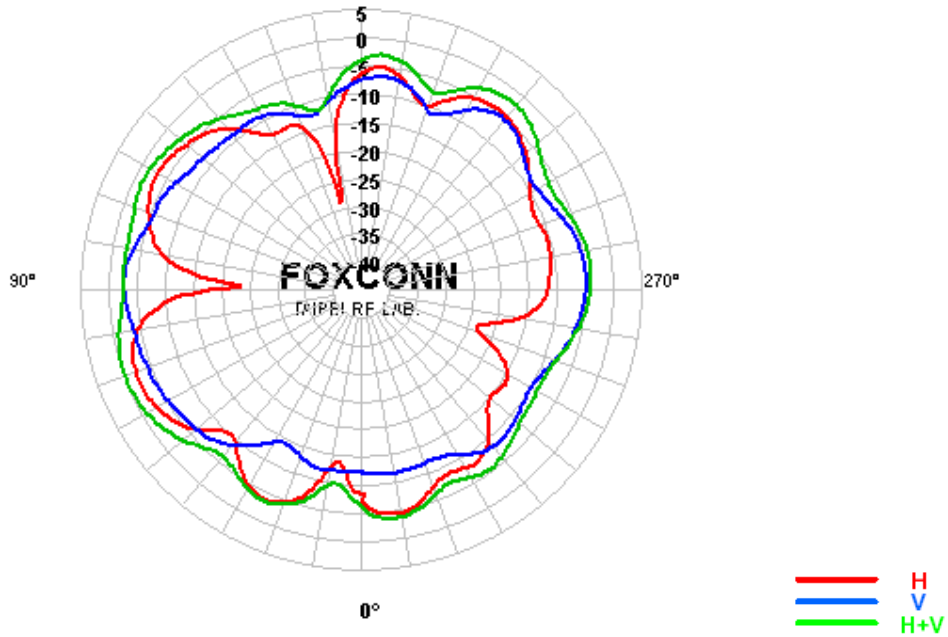
Center Frequency	2450 MHz
Horizontal (dBi) peak	-0.60
Vertical (dBi) peak	-2.49

Tx1 antenna: 2500 MHz



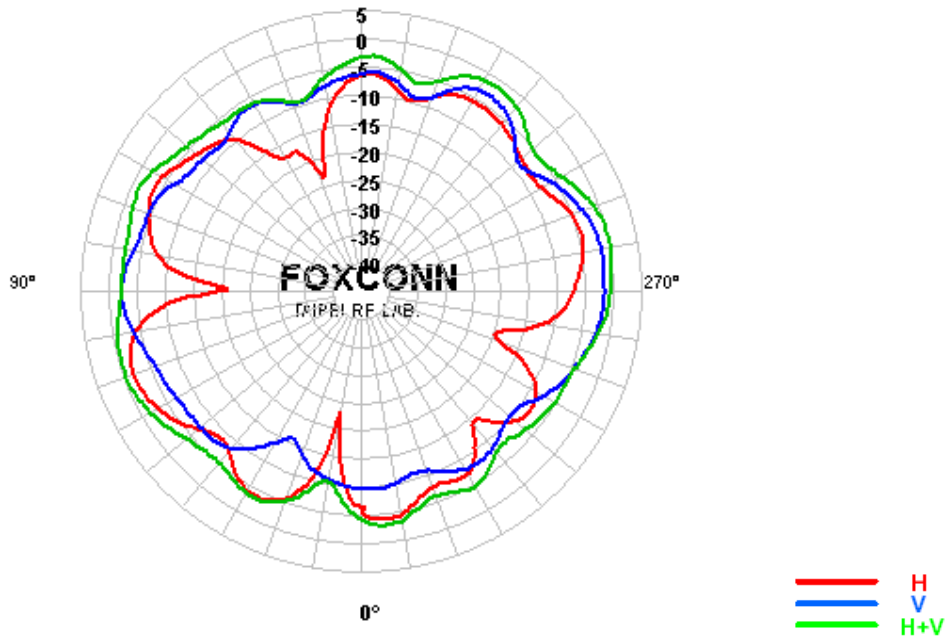
Center Frequency	2500 MHz
Horizontal (dBi) peak	0.54
Vertical (dBi) peak	-2.87

Tx2(or Rx2). antenna: 2400 MHz



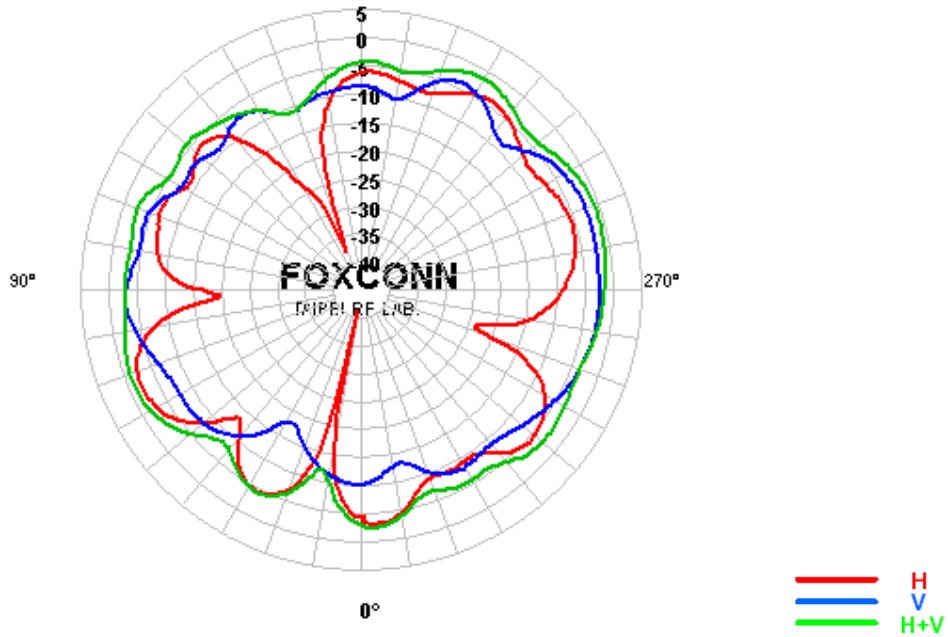
Center Frequency	2400 MHz
Horizontal (dBi) peak	-2.13
Vertical (dBi) peak	-2.63

Tx2(or Rx2). antenna: 2450 MHz



Center Frequency	2450 MHz
Horizontal (dBi) peak	-1.83
Vertical (dBi) peak	-1.40

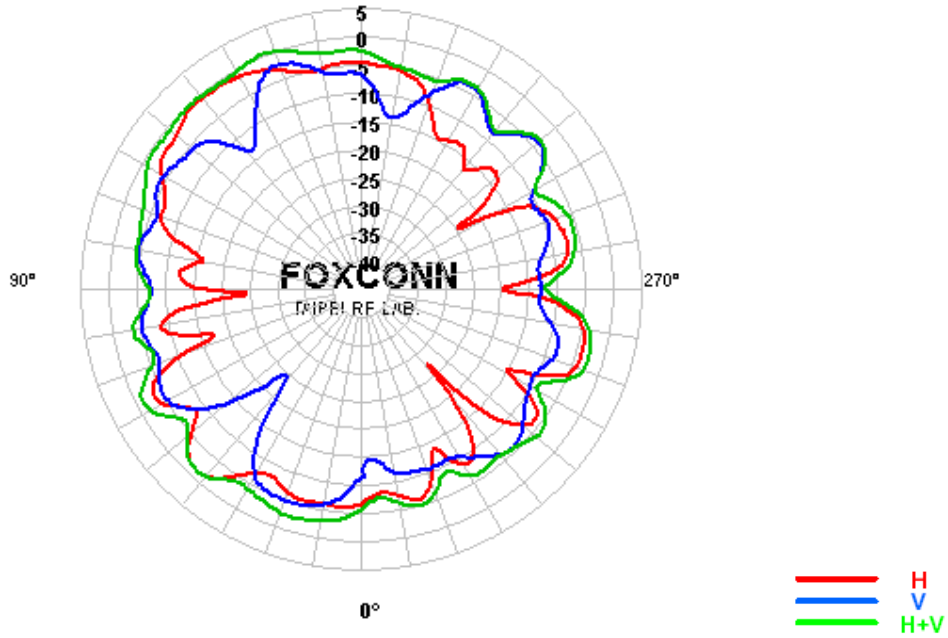
Tx2(or Rx2). antenna: 2500 MHz



Center Frequency	2500 MHz
Horizontal (dBi) peak	-2.22
Vertical (dBi) peak	-2.30

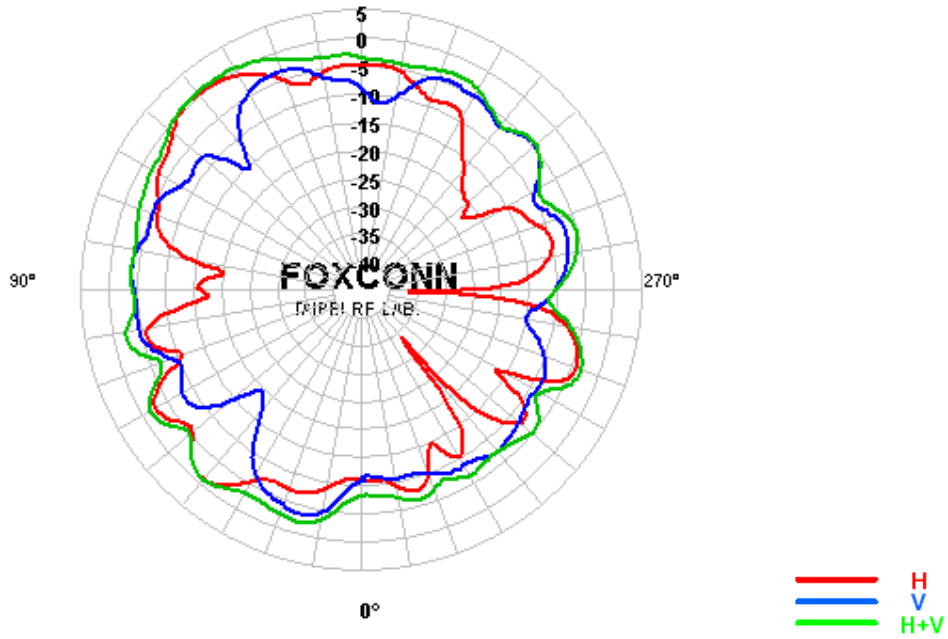
5100-5350MHz radiation characteristic

Tx1 antenna: 5100 MHz



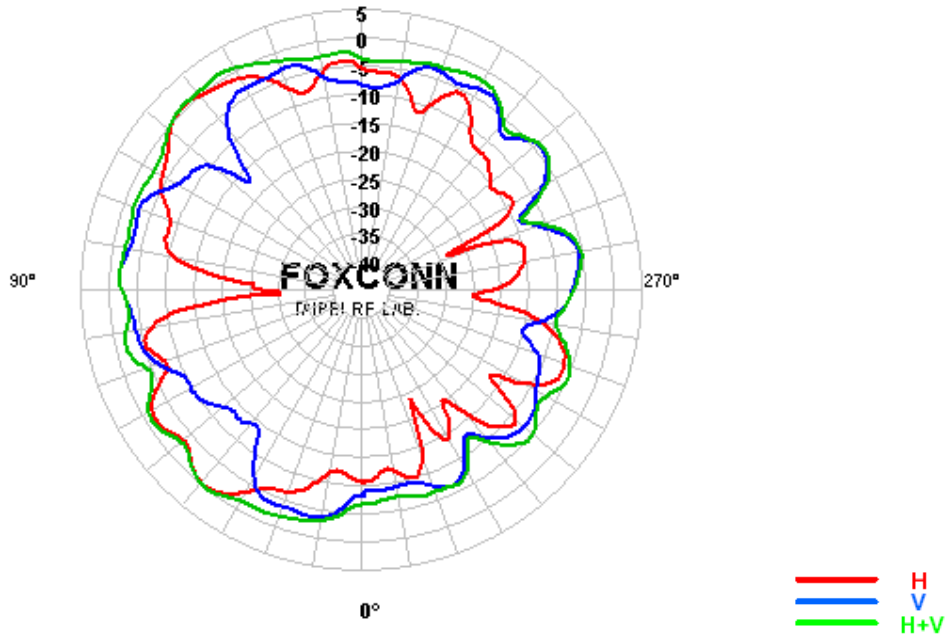
Center Frequency	5100 MHz
Horizontal (dBi) peak	-0.37
Vertical (dBi) peak	-2.23

Tx1 antenna: 5250 MHz



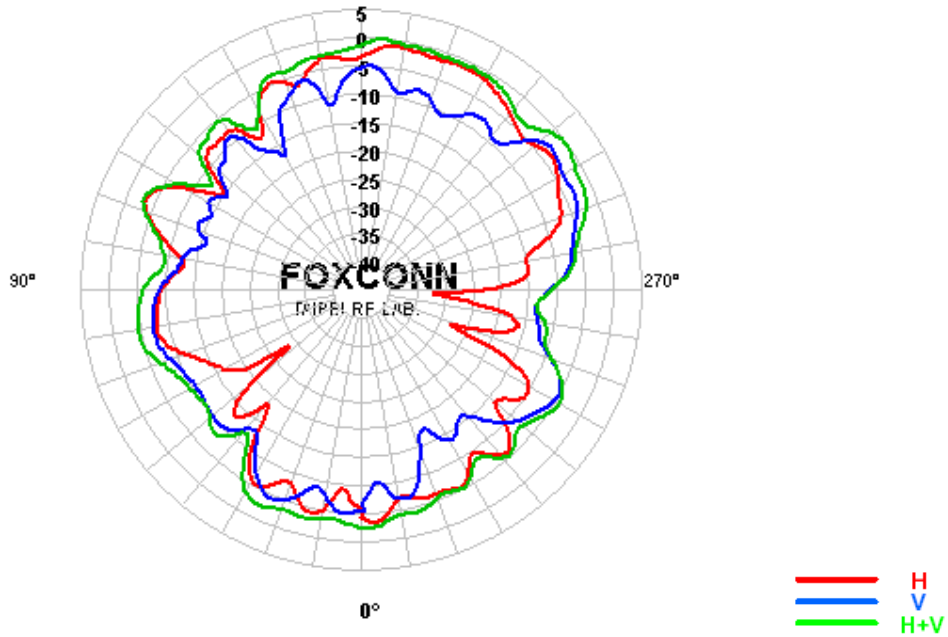
Center Frequency	5250 MHz
Horizontal (dBi) peak	0.73
Vertical (dBi) peak	-3.27

Tx1 antenna: 5350 MHz



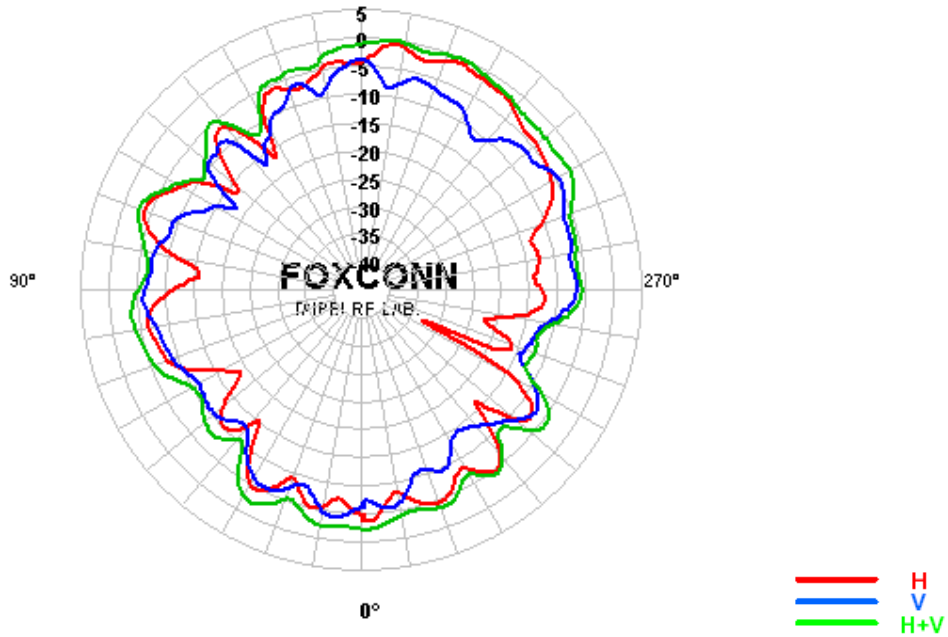
Center Frequency	5350 MHz
Horizontal (dBi) peak	0.74
Vertical (dBi) peak	-1.83

Tx2(or Rx2). antenna: 5150 MHz



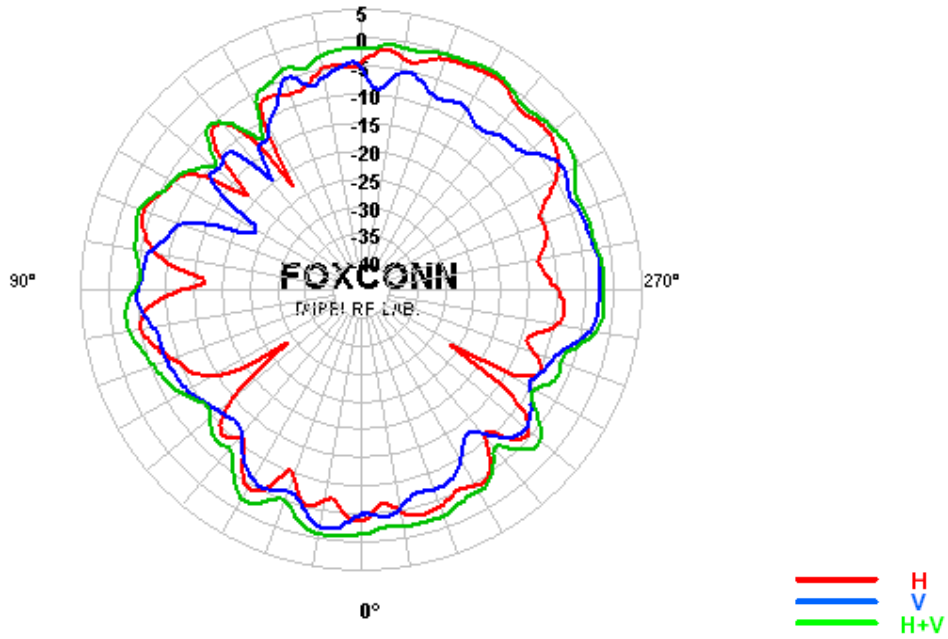
Center Frequency	5150 MHz
Horizontal (dBi) peak	-1.06
Vertical (dBi) peak	-2.62

Tx2(or Rx2). antenna: 5250 MHz



Center Frequency	5250 MHz
Horizontal (dBi) peak	-0.69
Vertical (dBi) peak	-3.74

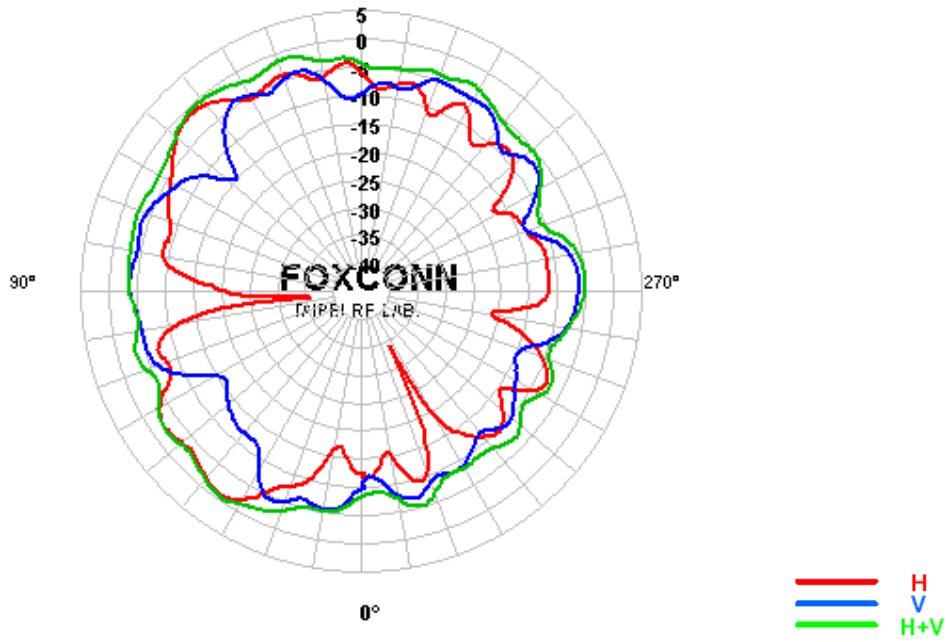
Tx2(or Rx2). antenna: 5350 MHz



Center Frequency	5350 MHz
Horizontal (dBi) peak	-0.02
Vertical (dBi) peak	-1.77

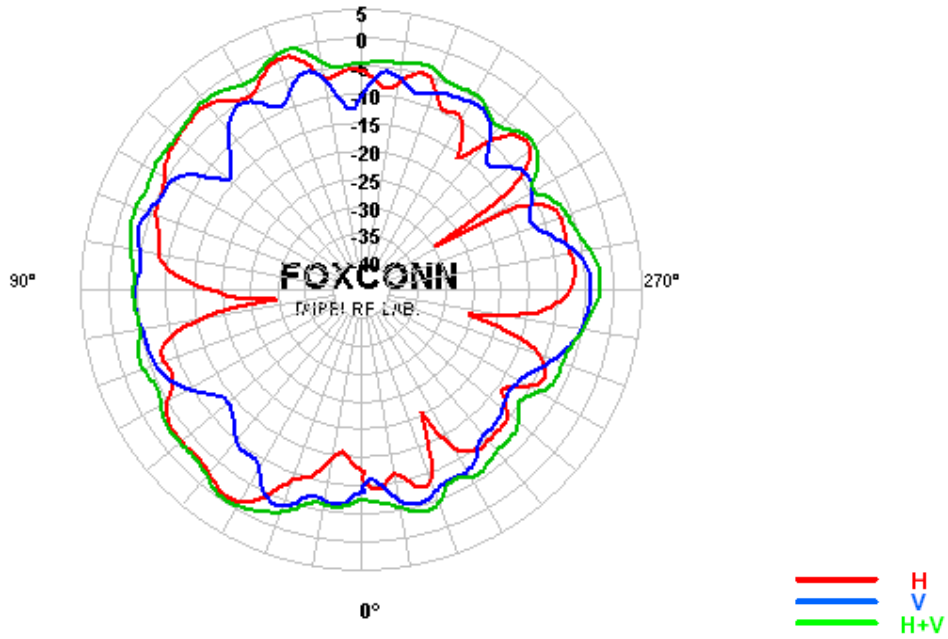
5470-5725MHz radiation characteristic

Tx1 antenna: 5470 MHz



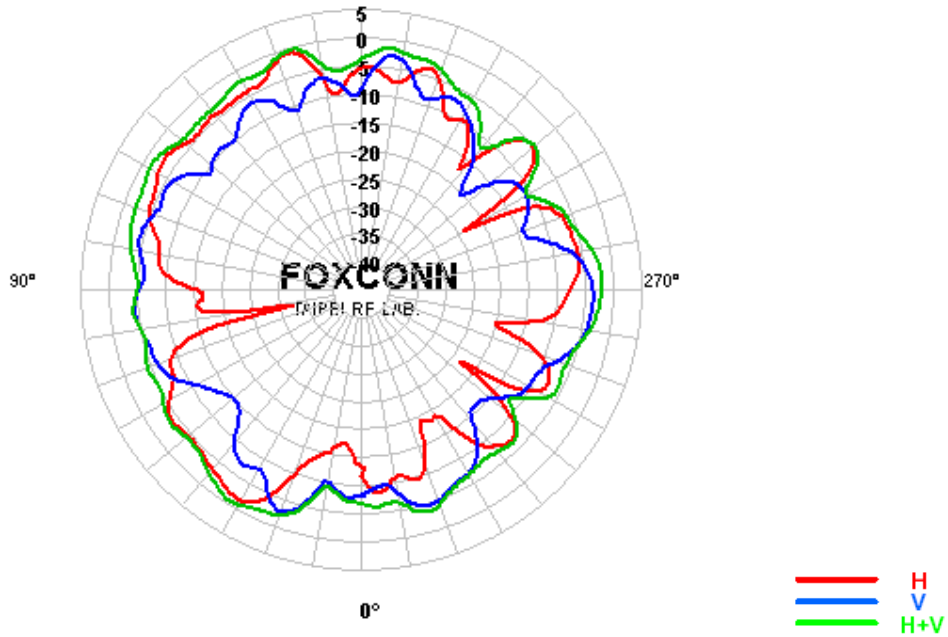
Center Frequency	5470 MHz
Horizontal (dBi) peak	-0.89
Vertical (dBi) peak	-3.65

Tx1 antenna: 5600 MHz



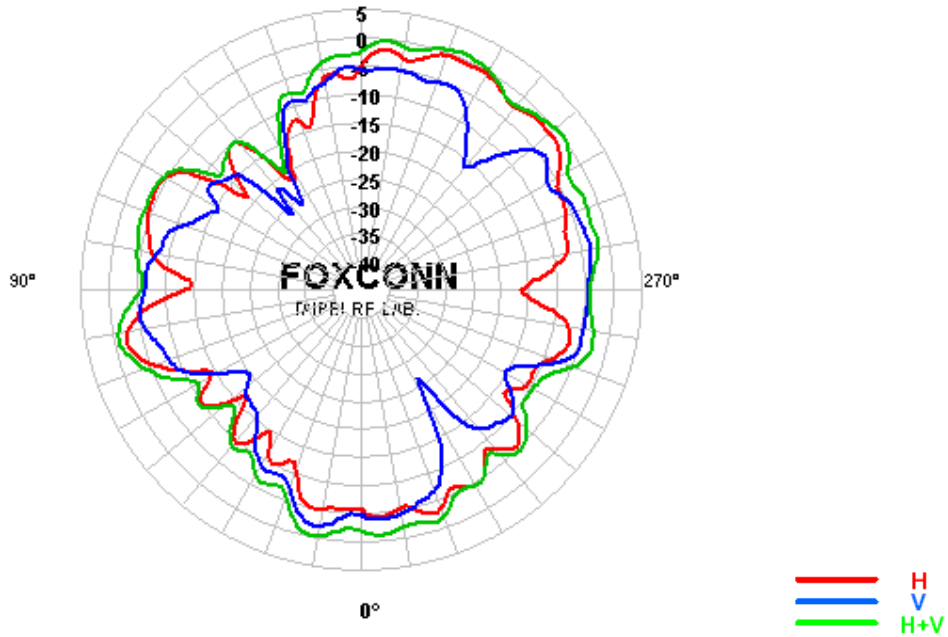
Center Frequency	5600 MHz
Horizontal (dBi) peak	-0.84
Vertical (dBi) peak	-3.65

Tx1 antenna: 5725 MHz



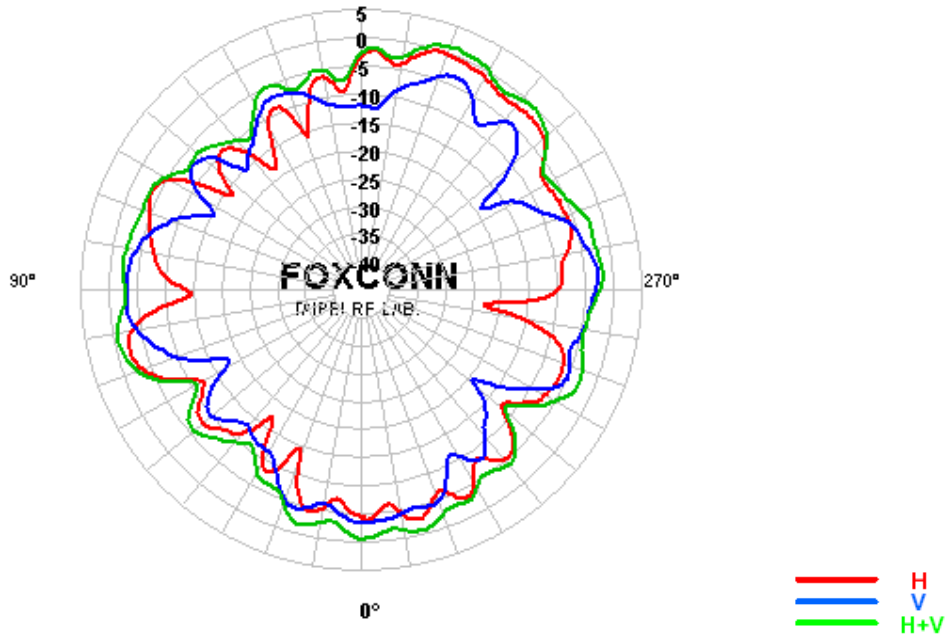
Center Frequency	5725 MHz
Horizontal (dBi) peak	-0.74
Vertical (dBi) peak	-2.80

Tx2(or Rx2). antenna: 5470 MHz



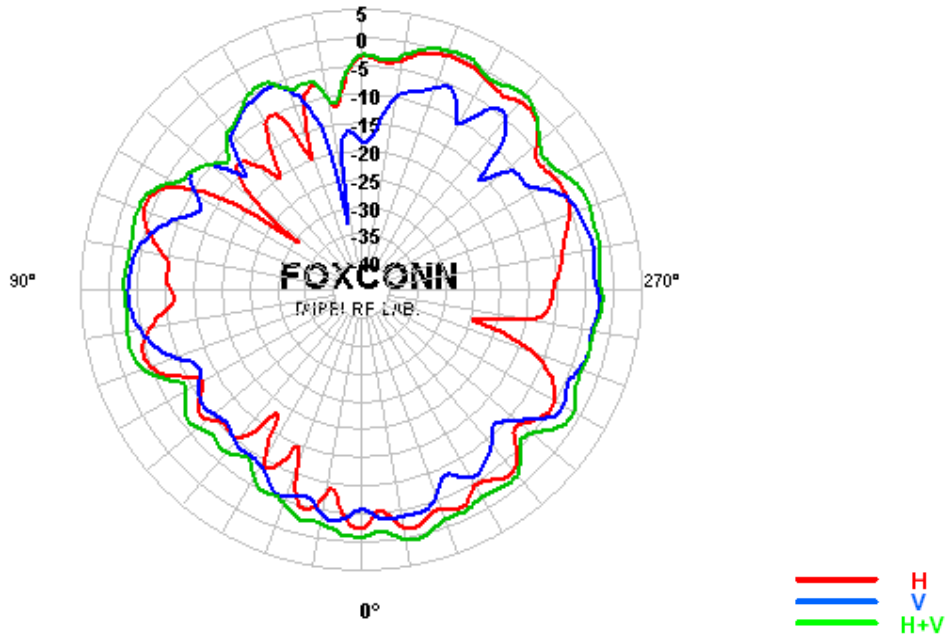
Center Frequency	5470 MHz
Horizontal (dBi) peak	-0.23
Vertical (dBi) peak	-1.97

Tx2(or Rx2). antenna: 5600 MHz



Center Frequency	5600 MHz
Horizontal (dBi) peak	-0.15
Vertical (dBi) peak	-2.59

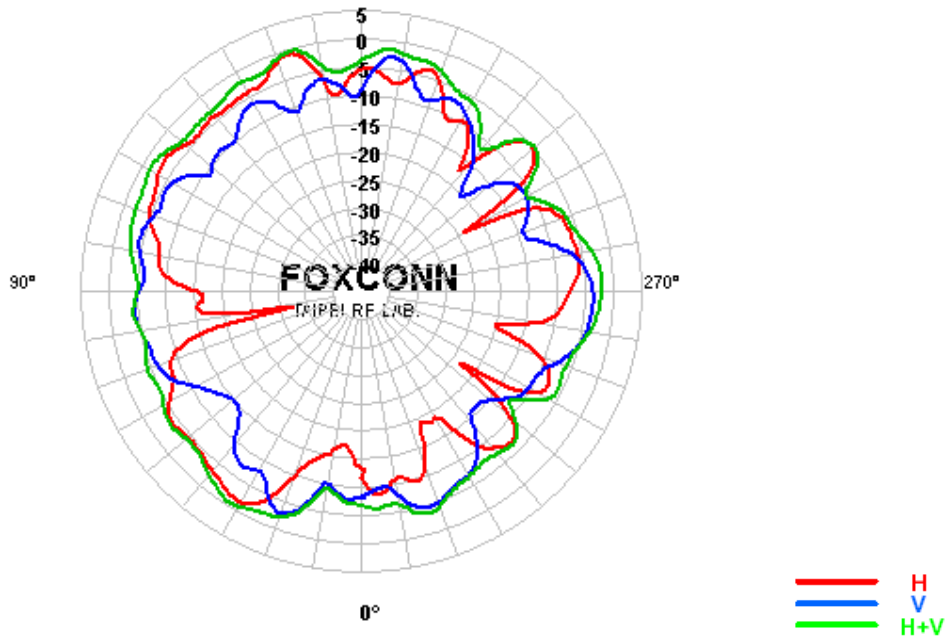
Tx2(or Rx2). antenna: 5725 MHz



Center Frequency	5725 MHz
Horizontal (dBi) peak	-0.23
Vertical (dBi) peak	-2.33

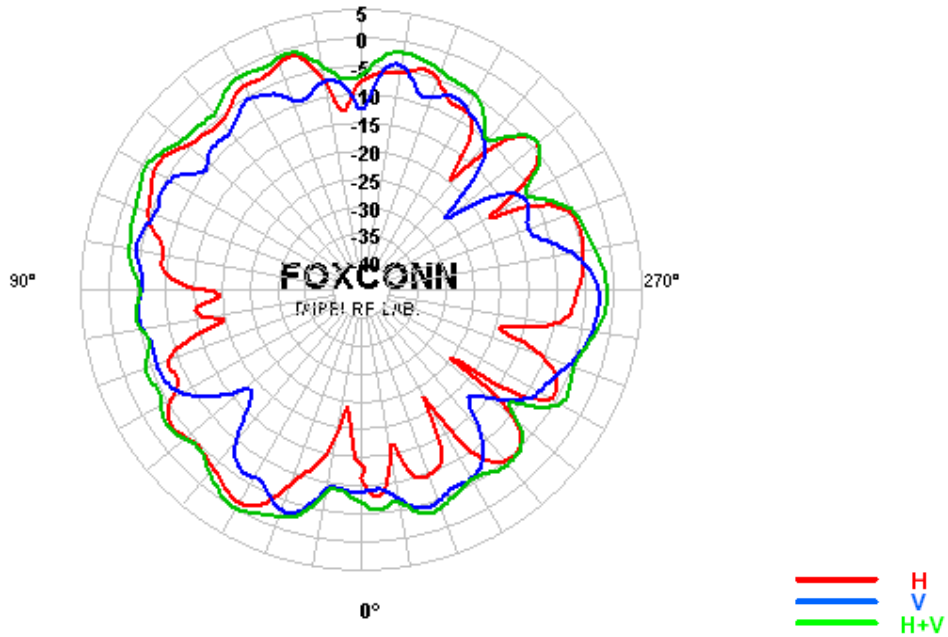
5725-5850MHz radiation characteristic

Tx1 antenna: 5725 MHz



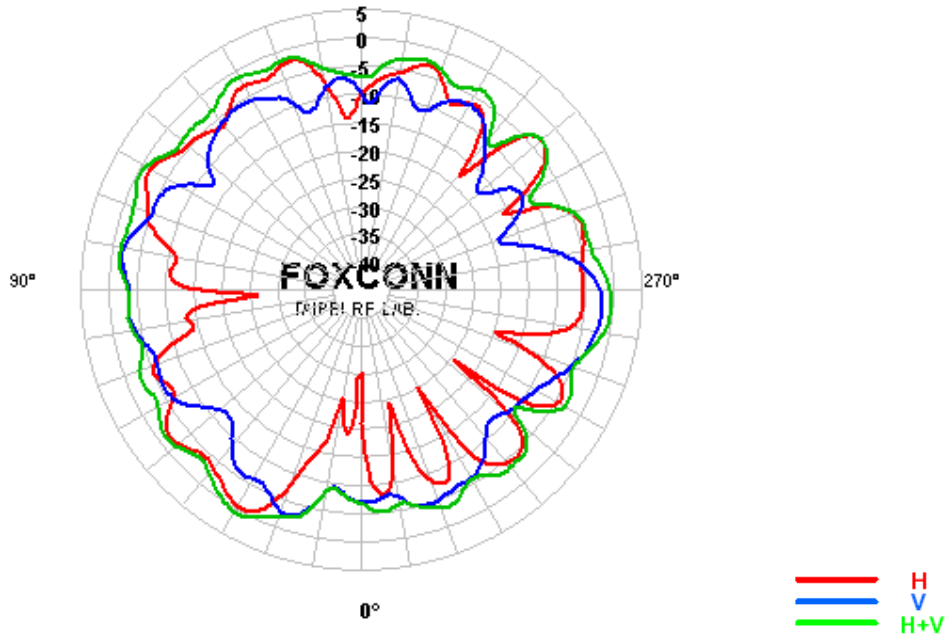
Center Frequency	5725 MHz
Horizontal (dBi) peak	-0.74
Vertical (dBi) peak	-2.80

Tx1 antenna: 5785 MHz



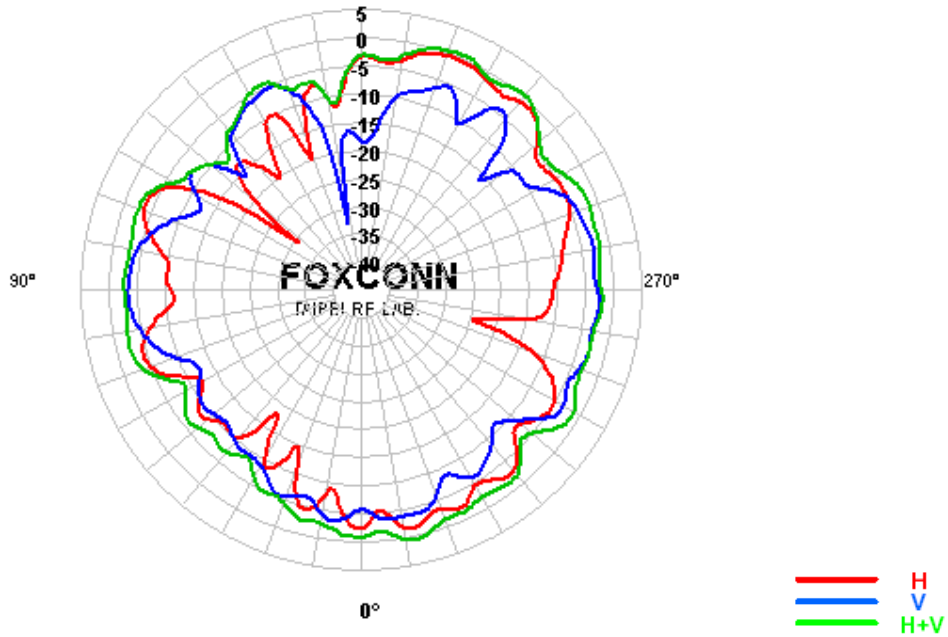
Center Frequency	5785 MHz
Horizontal (dBi) peak	-1.05
Vertical (dBi) peak	-2.40

Tx1 antenna: 5850 MHz



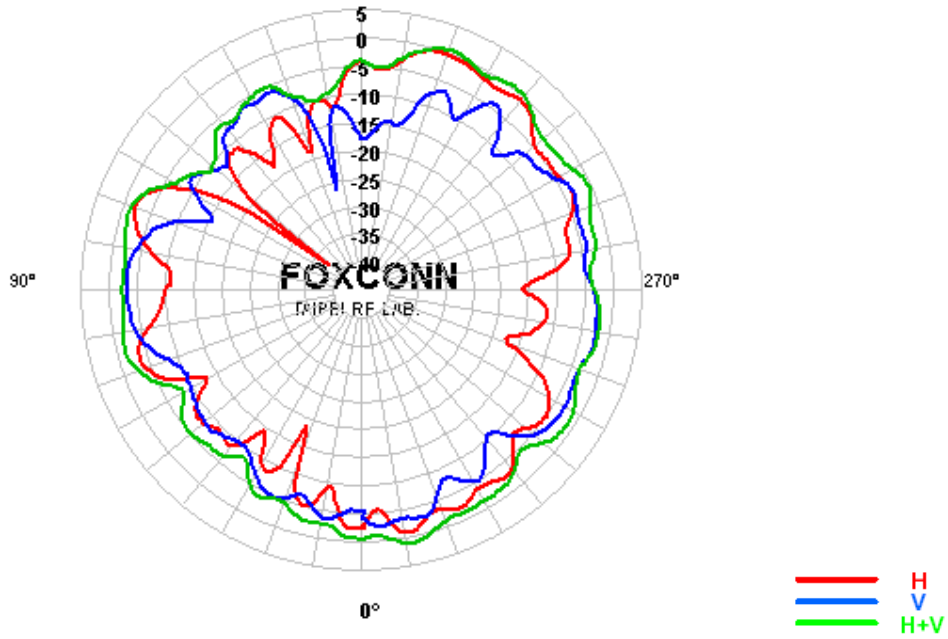
Center Frequency	5850 MHz
Horizontal (dBi) peak	-0.28
Vertical (dBi) peak	-1.76

Tx2(or Rx2). antenna: 5725 MHz



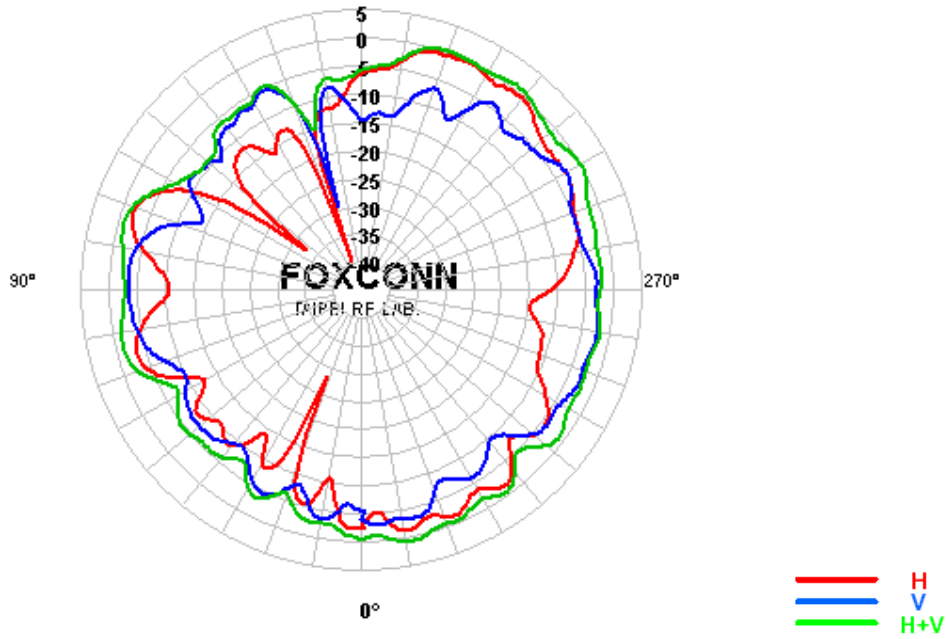
Center Frequency	5725 MHz
Horizontal (dBi) peak	-0.23
Vertical (dBi) peak	-2.33

Tx2(or Rx2). antenna: 5785 MHz



Center Frequency	5785 MHz
Horizontal (dBi) peak	-0.19
Vertical (dBi) peak	-2.35

Tx2(or Rx2). antenna: 5850 MHz



Center Frequency	5850 MHz
Horizontal (dBi) peak	-0.09
Vertical (dBi) peak	-2.02

Section 4. Host Platform Information

OEM / ODM Host platform: (XXXXXXX) platform correlated to antenna data
Rating label photo

Module location photo

Section 5. Antenna Host Platform Location Information

Include a dimensioned photos or dimensioned drawings of Tx1 and Tx2(or Rx2)iliary antenna placements.

Section 6. Antenna dimensional information for SAR evaluation

Include a dimensioned photos or dimensioned drawings showing the distance (mm) between the transmit (Tx1) antenna and the user (excluding hands, wrist, feet, and ankle)

Section 7. Diagram Example of Co-Location Antenna Separation

Indicate distance between WLAN module antennas and Bluetooth/other radio antenna element.

(Note: Due to the evolving rules regarding co-location, each platform will need to be reviewed on a case by case basis)